WHAT IS CLAIMED IS:

1. A method for retrieving data elements from a shared medium by a client computer, said shared medium maintaining a main list of data version information associated with said data elements:

said client maintaining a locally-stored list containing previously retrieved data elements associated with their data version;

said client reading from said locally-stored list data version associated with said data element and sending a request over a data network including said data version to said shared medium;

if said data version received from said client does not match said main list data version associated with said data element, said shared medium sending to said client a new copy of said data element and a new data version, said client updating said locally-stored list with said new copy of said data element and said new data version;

if said data version received from said client matches said main list data version associated with said data element, said shared medium sending to said client confirmation that said locally-stored data element associated with said data version is valid;

whereby transfer of copies of data elements between said shared medium and said client is reduced and an amount of network load needed to retrieve data elements from said shared medium is reduced.

2. The method as claimed in claim 1, wherein said client sending said data version to said shared medium comprises sending a null-value data version in the case in which said data element is not stored in said client memory and said shared medium replying to said client with a copy of said data element and data version.

3. The method as claimed in claim 1, wherein said request for said data element contains an address range defining said data element on said shared medium.

4. The method as claimed in claim 3, wherein said address range comprises non-contiguous storage blocks.

5. The method as claimed in claim 1, wherein said client computer communicates with said shared medium through a network block device driver.

6. The method as claimed in claim 1, wherein said shared medium is a server memory storage space.

7. A method for maintaining a main list of data version information associated with data elements on a shared medium, said data version information being used for data retrieval, comprising:

creating a list of data structures identifying data elements on said shared medium and said data version information;

receiving a request on a data network for writing at least one of said data elements;

following modification to said at least one of said data elements, giving a new data version to said at least one of said data elements that was modified.

8. The method as claimed in claim 7, wherein if said data elements being modified are associated with multiple separate data structures containing data version information, creating a new single data structure in said list associated with said data elements modified and removing said multiple separate data structures from said list.

9. The method as claimed in claim 7, wherein said initial version state is an initial version number and wherein said initial version number is incremented to obtain said new version state.

10. The method as claimed in claim 7, wherein said list of data structures is a double linked binary tree list.